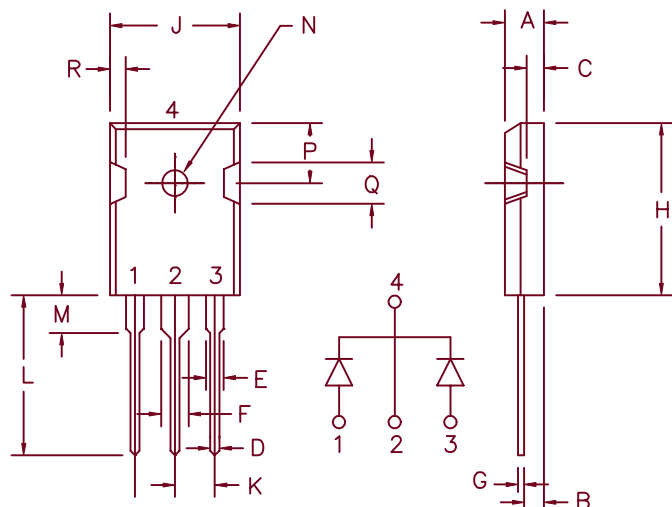


# 30Amp Schottky Barrier Rectifier FST3080 — FST30100



Similar to TO-247AD

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.185	.209	4.70	5.31	
B	.087	.102	2.21	2.59	
C	.059	.098	1.50	2.49	
D	.040	.055	1.02	1.40	
E	.079	.094	2.01	2.39	
F	.118	.133	3.00	3.38	
G	.016	.031	.410	0.78	
H	.819	.883	20.80	22.4	
J	.627	.650	15.93	16.5	
K	.215	—	5.46	—	Typ.
L	.790	.810	20.07	20.6	
M	.157	.180	3.99	4.57	
N	.139	.144	3.53	3.66	Dia.
P	.255	.300	6.48	7.62	
Q	.170	.210	4.32	5.33	
R	.080	.110	2.03	2.79	

Microsemi Catalog  
Number

FST3080  
FST3090  
FST30100

Repetitive Peak  
Reverse Voltage

80V  
90V  
100V

Transient Peak  
Reverse Voltage

80V  
90V  
100V

- Schottky Barrier Rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- $V_{RRM}$  80 to 100 Volts

## Electrical Characteristics

Average Forward Current per pkg.  
Average Forward Current per leg  
Maximum Surge Current per leg  
Max. Peak Forward Voltage per leg  
Max. Peak Forward Voltage per leg  
Max. Peak Reverse Current per leg  
Max. Peak Reverse Current per leg  
Typical Junction Capacitance per leg

$I_F(AV)$  30Amps  
 $I_F(AV)$  15Amps  
 $I_{FSM}$  350 Amps  
 $V_{FM}$  0.65 Volts  
 $V_{FM}$  0.85 Volts  
 $I_{RM}$  15 mA  
 $I_{RM}$  500  $\mu$ A  
 $C_J$  550 pF

$T_C = 155^\circ\text{C}$ , square wave,  $R_{\theta JC} = 0.9^\circ\text{C/W}$   
 $T_C = 155^\circ\text{C}$ , square wave,  $R_{\theta JC} = 1.8^\circ\text{C/W}$   
8.3ms, half sine,  $T_J = 175^\circ\text{C}$   
 $I_{FM} = 15\text{A}$ ,  $T_J = 175^\circ\text{C}^*$   
 $I_{FM} = 15\text{A}$ ,  $T_J = 25^\circ\text{C}^*$   
 $V_{RRM}$ ,  $T_J = 125^\circ\text{C}^*$   
 $V_{RRM}$ ,  $T_J = 25^\circ\text{C}$   
 $V_R = 5.0\text{V}$ ,  $T_J = 25^\circ\text{C}$

\*Pulse test: Pulse width 300  $\mu$ sec, Duty cycle 2%

## Thermal and Mechanical Characteristics

Storage temp range  
Operating junction temp range  
Max thermal resistance per leg  
Max thermal resistance per pkg.  
Mounting Torque  
Weight

$T_{STG}$   
 $T_J$   
 $R_{\theta JC}$   
 $R_{\theta JC}$

$-55^\circ\text{C}$  to  $175^\circ\text{C}$   
 $-55^\circ\text{C}$  to  $175^\circ\text{C}$   
 $1.8^\circ\text{C/W}$   
 $0.9^\circ\text{C/W}$   
10 inch pounds maximum (4-40 screw)  
.22 ounces (6.36 grams) typical

# FST3080 — FST30100

Figure 1  
Typical Forward Characteristics — Per Leg

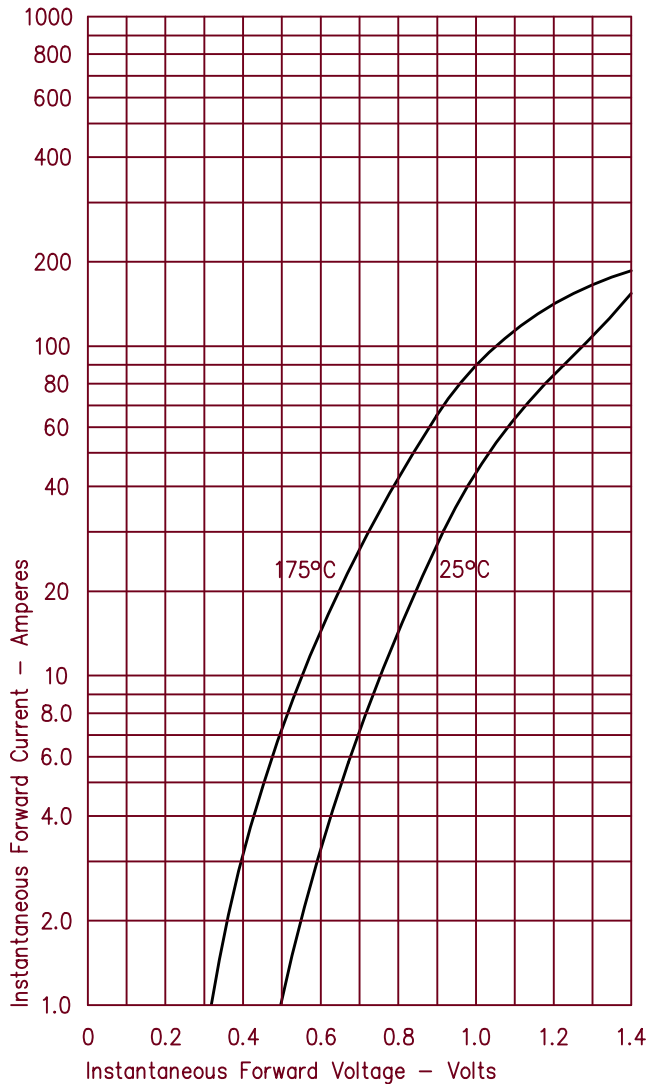


Figure 3  
Typical Junction Capacitance — Per Leg

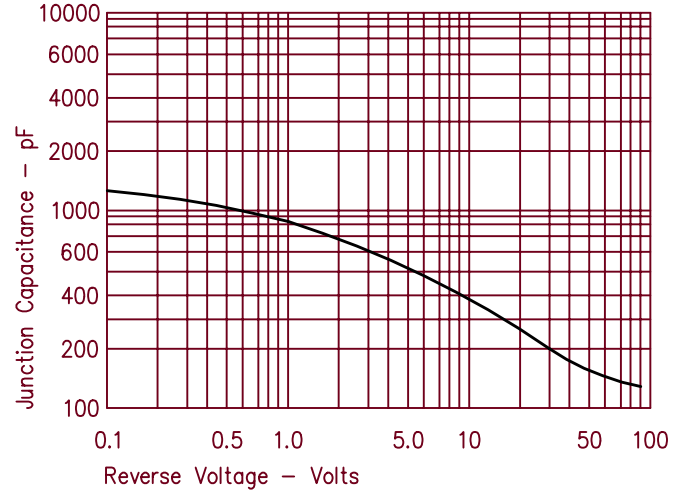


Figure 4  
Forward Current Derating — Per Leg

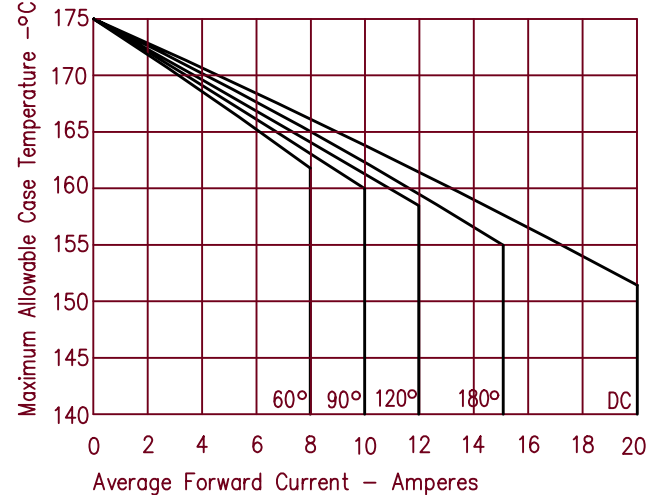


Figure 2  
Typical Reverse Characteristics — Per Leg

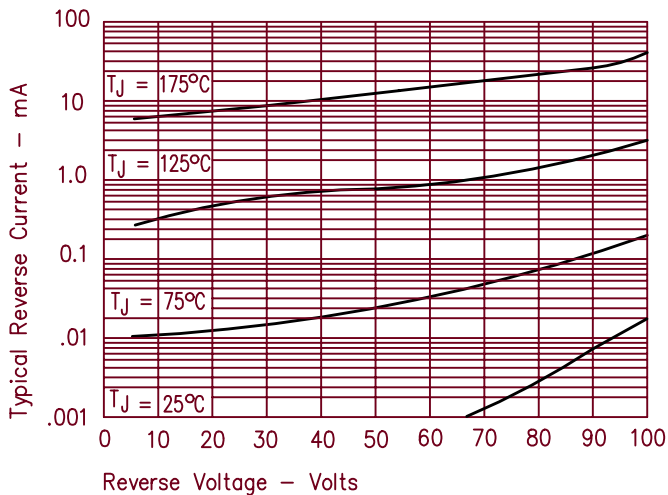


Figure 5  
Maximum Forward Power Dissipation — Per Leg

